

Title (en)

RECHARGEABLE LITHIUM BATTERY WITH A COMPOSITE ANODE

Title (de)

WIEDERAUFLADBARE LITHIUM-BATTERIE MIT EINER KOMPOSITANODE

Title (fr)

BATTERIE AU LITHIUM RECHARGEABLE COMPORTANT UNE ANODE COMPOSITE

Publication

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Application

**EP 19765455 A 20190905**

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Abstract (en)

[origin: WO2020049093A1] The invention relates to a rechargeable lithium battery comprising: a composite anode (negative electrode) containing, as an electrochemically active component in the composite anode, a metal nitrogen compound of general formulae (I) and/or (II), wherein (I) and (II) are present in any mixing ratio and M2 = an alkaline earth element selected from the group consisting of Mg, Ca, Sr, Ba or any mixture thereof, where  $x = 0 - 4$ ;  $z = 0 - 2$ ;  $m = 1$  or  $0$ ;  $n = 1$  or  $0$ , where  $(m + n) = 1$ , and wherein these correspond to the fully discharged, lithium-poorest charge state of the nitrogen-containing compounds; and a cathode (positive electrode) separated therefrom by a separator, said cathode containing compounds capable of lithium insertion selected from metal oxides, lithium metal oxides, lithium oxides and lithium hydroxide, and containing an aprotic lithium electrolyte, wherein the electrochemically active metal nitrogen compounds of the composite anode are embedded in a transition metal-containing, electronically conductive or mixed conductive network consisting of finely distributed transition metals and/or electronically conductive or mixed conductive interstitial transition-metal compounds, and the weight ratio between the components forming the network and the nitrogen-containing compounds I and/or II is in the range of 1:100 to 1:2.

IPC 8 full level

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